YASKAWA

Data sheet
SM 331S - SPEED-Bus (331-7AF70)

Technical data

Order no.	331-7AF70
Type	SM 331S - SPEED-Bus
General information	
Note	-
Features	8x fast AI 16 Bit Current +/- 20 mA Potential isolation between the channels 25µs...1000µs sampling rate (parameterizable) Memory: 8192 value/channel Oscilloscope-/FIFO-Function Alarm parameterizable For 20 pole front connectors
SPEED-Bus	yes
Current consumption/power loss	
Current consumption from backplane bus	530 mA
Power loss	4 W
Technical data analog inputs	
Number of inputs	8
Cable length, shielded	50 m
Rated load voltage	DC 24 V
Current consumption from load voltage L+ (without load)	62 mA
Voltage inputs	-
Min. input resistance (voltage range)	-
Input voltage ranges	-
Operational limit of voltage ranges	-
Operational limit of voltage ranges with SFU	-
Basic error limit voltage ranges	-
Basic error limit voltage ranges with SFU	-
Destruction limit voltage	-
Current inputs	yes
Max. input resistance (current range)	100 Ohm
Input current ranges	-20 mA ... +20 mA
Operational limit of current ranges	+/-0.6%
Operational limit of current ranges with SFU	-
Grundfehlergrenze Strombereiche	+/-0.4%
Radical error limit current ranges with SFU	-
Destruction limit current inputs (electrical current)	max. 40mA
Destruction limit current inputs (voltage)	max. 30V
Resistance inputs	-
Resistance ranges	-
Operational limit of resistor ranges	-
Operational limit of resistor ranges with SFU	-
Basic error limit	-
Basic error limit with SFU	-

Publish date: 09.04.2020

Destruction limit resistance inputs	-
Resistance thermometer inputs	-
Resistance thermometer ranges	-
Operational limit of resistance thermometer ranges	-
Operational limit of resistance thermometer ranges with SFU	-
Basic error limit thermoresistor ranges	-
Basic error limit thermoresistor ranges with SFU	-
Destruction limit resistance thermometer inputs	-
Thermocouple inputs	-
Thermocouple ranges	-
Operational limit of thermocouple ranges	-
Operational limit of thermocouple ranges with SFU	-
Basic error limit thermoelement ranges	-
Basic error limit thermoelement ranges with SFU	-
Destruction limit thermocouple inputs	-
Programmable temperature compensation	-
External temperature compensation	-
Internal temperature compensation	-
Temperature error internal compensation	-
Technical unit of temperature measurement	-
Resolution in bit	16
Measurement principle	successive approximation
Basic conversion time	25 µs all channels
Noise suppression for frequency	-
Initial data size	16 Byte

Status information, alarms, diagnostics

Status display	none
Interrupts	yes
Process alarm	yes, parameterizable
Diagnostic interrupt	yes, parameterizable
Diagnostic functions	yes
Diagnostics information read-out	possible
Supply voltage display	none
Group error display	red SF LED
Channel error display	none

Isolation

Between channels	yes
Between channels of groups to	1
Between channels and backplane bus	yes
Between channels and power supply	yes
Max. potential difference between circuits	-
Max. potential difference between inputs (Ucm)	DC 30 V
Max. potential difference between Mana and Mintern (Uiso)	-
Max. potential difference between inputs and Mana (Ucm)	-
Max. potential difference between inputs and Mintern (Uiso)	DC 75 V/ AC 50 V
Max. potential difference between Mintern and outputs	-
Insulation tested with	DC 500 V

Datasizes

Input bytes	16
Output bytes	0
Parameter bytes	41
Diagnostic bytes	16

Housing

Material	PPE
Mounting	DIN rail SPEED-Bus

Mechanical data

Dimensions (WxHxD)	40 mm x 125 mm x 120 mm
Net weight	210 g
Weight including accessories	-
Gross weight	-

Environmental conditions

Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C

Certifications

UL certification	yes
KC certification	-